

AMENDMENT

In the specification:

Below the title, please insert the following sentence.

This application is a 35 U.S.C. § 371 application of WO 2004/036209, filed October 17, 2003 claiming priority to EP Appl. No. 02023415.9 filed October 18, 2002, both of which are incorporated herein by reference in their entirety.

Please replace the Abstract in its entirety with the Abstract as follows:

The invention relates to a device and methods for characterising flowing substances, liquid or gas. The device includes: a transport duct with a heating or a cooling element; a temperature difference sensor having a temperature measurement cell downstream of the heating or cooling element and means to determine a temperature difference in the flowing substance upstream and downstream of the heating or cooling element; a flow control means having flow measurement means for measuring a mass flow characteristic and a flow correction means for correcting for measured mass flow variations; and an evaluation means for evaluating a characterising feature of the flowing substance comprising a function relating temperature differences measured on one or more calibration substances to one or more characterising features of the flowing substance. Various embodiments relate to the related use and methods of the device for identification and control of the flowing substance.